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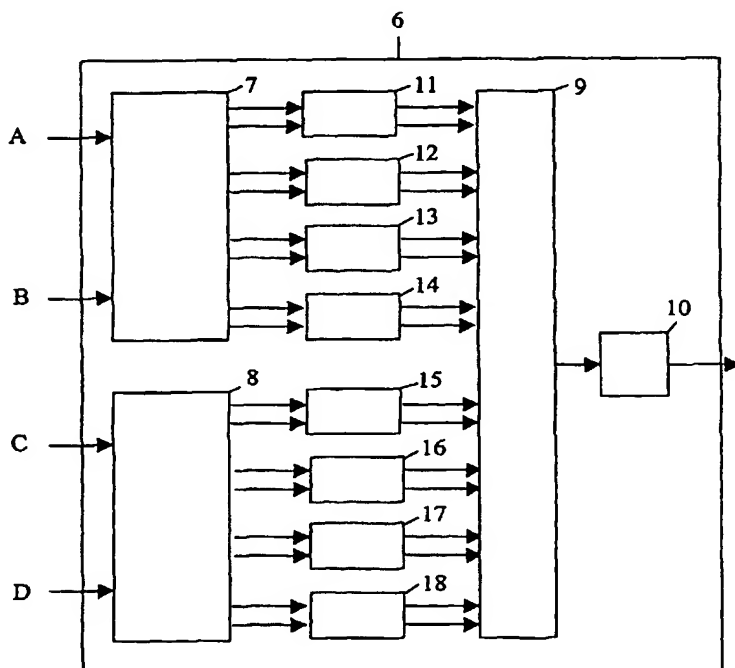
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[Continued on next page]

(54) Title: OPTICAL DISK SYSTEM WITH DELAY-DIFFERENCE DETECTOR WITHOUT DELAY LINES



(57) Abstract: Optical disk systems comprising photo detectors (1) for detecting optical disks comprising amplifiers and slicers (2-5) and delay-difference detectors (6) for detecting delay differences in sliced amplified detection signals are improved by installing delaylineless delay-difference detectors (6) comprising combinatorial-logic circuits (7,8) like inverters, ORs, NORs, ANDs, NANDs and sequential-logic circuits (11-18) like SetResetFlipFlops. Without the prior art delay lines, said delay-difference detectors (6) are of a lower complexity and low costly and can be well integrated. By introducing a first pair of sequential-logic circuits (11,12,15,16) for detecting delay differences between rising edges and a second pair of sequential-logic circuits (13,14,17,18) for detecting delay differences between falling edges, both kinds of edges are being used and the influence of time-jitter is less compared to the situation where just one kind of edge is used. Said delay-difference detector (6) further comprises an analog adder/subtractor (9) for adding/ subtracting sequential-logic circuit output signals and low pass filter(s) (10) located before or after said adder/subtractor (9).



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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G11B7/09

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 808 979 A (ISHIBASHI HIROMICHI ET AL) 15 September 1998 (1998-09-15) the whole document	1-10
Y	-----	11
Y	EP 1 096 481 A (SAMSUNG ELECTRONICS CO LTD) 2 May 2001 (2001-05-02) abstract paragraph '0045! - paragraph '0061!; figures 4-8 -----	11



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Patent family members are listed in annex.

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Information on patent family members

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